Appl. No. 09/942,061

Amdt. Dated January 29, 2007

Reply to Office Action of Aug. 29, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-20 (cancelled)

- 21. (previously presented) A reversible ratchet-type wrench comprising:
 - a handle;
 - a head extended from the handle;
 - a cavity disposed in a web defined between the handle and the head;
 - a compartment disposed in the web and having a first end communicated with the cavity and a second end communicated with outside, thereby leaving a bridge in the web;
 - a drive member rotatably mounted in a hole through the head, with the drive member including a plurality of teeth formed on an outer periphery thereof;
 - a pawl disposed within the cavity and including a first side with a plurality of ratchet teeth for releasably engaging with the teeth of the drive member, with the pawl further including a second side with a recess;
 - a rotatable switch member disposed within the compartment and including a turnpiece for manual operation and an actuating plate extended from the turn-piece, the switch member being switchable between two positions for changing ratcheting direction of the drive member, with the actuating plate of the switch member including a first receptacle that faces the recess of the pawl and that has a first end wall;
 - an elastic element having a first end disposed with the first receptacle and a second end attached to the rotatable switch member; and
 - a peg, with the peg having a first end movably received in the recess of the pawl and a second end, with the second end of the peg being received in the first receptacle, with the first end of the elastic element configured to bias the second end of the peg, with the peg and the elastic member being rotatable with the actuating plate and biasing the ratchet teeth of the pawl to engage with the teeth of the drive member.
- 22 (previously presented) The reversible ratchet-type wrench as claimed in claim 21, wherein the drive member is a gear wheel including an inner periphery adapted to drive a fastener.

23. (previously presented) The reversible ratchet-type wrench as claimed in claim 21, wherein the drive member includes a drive column for releasably engaging with a socket.

24. (previously presented) The reversible ratchet-type wrench as claimed in claim 23, wherein the head includes an end wall with an opening, and wherein the drive member includes a stub rotatably received in the opening.

25. (previously presented) The reversible ratchet-type wrench as claimed in claim 21, with the drive member being rotatably mounted in a hole of the head, wherein an inner periphery defining the hole of the head includes a first annular groove, and wherein the outer periphery of the drive member includes a second annular groove, with the reversible ratchet-type wrench further comprising a C-clip received in the first annular groove and the second annular groove, thereby rotatably retaining the drive member in the head.

26.-39. (cancelled)

40. (previously presented) The reversible ratchet-type wrench as claimed in claim 25, wherein the drive member includes a top and a bottom, with the outer periphery extending between the top and the bottom, with the second annular groove being spaced from the top and the bottom.

41. (previously presented) The reversible ratchet-type wrench as claimed in claim 21, with the switch member being rotatable about an axis, with the actuating plate extending in a direction parallel to the axis of the switch member from the turn-piece.

42.-56. (cancelled)

57. (previously presented) The reversible ratchet-type wrench as claimed in claim 21, with the peg having a periphery extending from the second end, with the periphery of the peg being of a size for slideable receipt within the first receptacle.

58. (cancelled)

- (previously presented) The reversible ratchet-type wrench as claimed in claim 21, further comprising, in combination: a web being defined between the handle and the head; and a cavity defined in the web, with the pawl having a first end and an opposite end, with the first end of the pawl engaging a wall portion defining the cavity in one of the two positions of the switch member and the opposite end of the pawl engaging another wall portion defining the cavity in the other of the two positions of the switch member.
- 60. (currently amended) A reversible ratchet-type wrench comprising:
 - a handle;
 - a head extended from the handle, the head defining a hole through the head, the hole having a periphery;
 - a cavity disposed in a web defined between the handle and the head[[;]], the web defining a cavity and a compartment, the cavity having a first cavity wall portion and an opposite second cavity wall portion and being in communication with the hole along a peripheral section of the periphery of the hole, [[a]] the compartment disposed in the web and having a first end communicated in communication with the cavity and a second end communicated in communication with an outside of the web;
 - a drive member rotatably mounted in [[a]] the hole through the head, [[with]] the drive member including a plurality of teeth formed on an outer periphery thereof;
 - a sliding pawl disposed within the cavity, [[and]] the sliding pawl including a first side [[with]] having a plurality of ratchet teeth, [[for]] the ratchet teeth being releasably [[engaging]] engaged with the teeth of the drive member, [[with]] the pawl further including a second side opposite to the first side, the second side defining a first pawl end portion and an opposite second pawl end portion, [[with]] the second side of the pawl including a recess defined by a recess wall, [[a]] the recess wall defining the recess including a first wall portion end shoulder at an end of the recess and a second wall portion end shoulder at an opposite end of the recess, the pawl being slidable along the peripheral section of the periphery of the hole between a first pawl location, in which one of the first and second pawl end portion bears on one of the first and second cavity wall portions, and a second pawl location, in which the other of the first and second pawl end portions bears on the other of the first and second cavity wall portions;

a manually rotatable switch member disposed within the compartment and including a turn-piece for manual operation and an actuating plate extended from the turn-piece, the switch member being switchable rotatable between two positions for a first switching position and a second switching position so as to change a ratcheting direction of the drive member by sliding said pawl between [[a]] the first pawl location and [[a]] the second pawl location so as to change ratcheting direction of the drive member, with the actuating plate of the switch member including a first receptacle that faces the recess of the pawl and that has a first end wall;

an elastic element; and

a pin, with the pin having a longitudinal direction and having a first end and a second end, the first end of the pin being movably received in the recess of the pawl and a second end and slidably bearing on said recess wall, [[with]] the second end of the pin being slidably received [[in]] within the first receptacle and including a second receptacle with a second end wall, [[with]] the elastic element being located in the first and second receptacles between the first end wall and the second end wall thereby biasing the pin, [[with]] the pin and the elastic member being rotatable with the actuating plate switch member and biasing the ratchet teeth of the pawl to engage with the teeth of the drive member[[,]];

wherein the first end of the pin alternating between bearing on is alternately engaged with the first wall-portion end shoulder and the second wall-portion end shoulder as the switch member rotates from one of the first and second switching positions to the other of the first and second switching positions, wherein when the pawl is in the first location, the center of the pawl-is located in a different location than the center of the pawl when the pawl is located in the second location thereby alternately shifting the pawl from one of the first and second pawl locations to the other of the first and second pawl locations along said peripheral section of the hole, and positions of the end shoulders are concurrently shifted with shifting the pawl, and when said one of the first and second end shoulders is engaged by the first end of the pin in said one of the first and second end shoulders takes a position in which the first end of the pin is bearing thereon substantially in the longitudinal direction of the pin, thereby bearing an associated one of the first and second pawl end portions against an associated one of the first and second pawl end portions against an associated one of the first and second cavity wall portions, while the other of the first and second cavity wall

portions, in which the first end of the pin, as the switch member is rotated to the other of the

first and second switching positions, becomes engaged with the other of the first and second

end shoulders in a side direction of the pin when the first end of the pin is in a mid location

between the first and second cavity wall portions, so as to shift the pawl into the other of the

first and second pawl locations as the pin continues to rotate from the mid location into the

other of the first and second switching positions.

61 (previously presented) The reversible ratchet-type wrench as claimed in claim 60, wherein

the drive member is a gear wheel including an inner periphery adapted to drive a fastener.

62. (previously presented) The reversible ratchet-type wrench as claimed in claim 60, wherein

the drive member includes a drive column for releasably engaging with a socket.

63. (previously presented) The reversible ratchet-type wrench as claimed in claim 62, wherein

the head includes an end wall with an opening, and wherein the drive member includes a stub

rotatably received in the opening.

64 (previously presented) The reversible ratchet-type wrench as claimed in claim 60, with the

drive member being rotatably mounted in a hole of the head, wherein an inner periphery defining the

hole of the head includes a first annular groove, and wherein the outer periphery of the drive member

includes a second annular groove, with the reversible ratchet-type wrench further comprising a C-clip

received in the first annular groove and the second annular groove, thereby rotatably retaining the

drive member in the head.

65. (previously presented) The reversible ratchet-type wrench as claimed in claim 64, wherein

the drive member includes a top and a bottom, with the outer periphery extending between the top

and the bottom, with the second annular groove being spaced from the top and the bottom.

66. (previously presented) The reversible ratchet-type wrench as claimed in claim 60, with the

switch member being rotatable about an axis, with the actuating plate extending in a direction

parallel to the axis of the switch member from the turn-piece.

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67. (previously presented) The reversible ratchet-type wrench as claimed in claim 60, with the

pin having a periphery extending from the second end, with the periphery of the pin being of a size

for slideable receipt within the first receptacle, with the second receptacle located within the

periphery of the pin.

68. (previously presented) The reversible ratchet-type wrench as claimed in claim 67, with the

second receptacle being spaced from the periphery of the pin-

69. (previously presented) The reversible ratchet-type wrench as claimed in claim 60, with the

pawl having a first end and an opposite end, with the first end of the pawl engaging a wall portion

defining the cavity in one of the two positions of the switch member and the opposite end of the pawl

engaging another wall portion defining the cavity in the other of the two positions of the switch

member.

70. (previously presented) The reversible ratchet-type wrench as claimed in claim 69 wherein

when the first end of the pawl is engaged with the wall portion of the cavity, the opposite end of the

pawl is not engaged with the another wall portion of the cavity.

71. (currently amended) The reversible ratchet-type wrench as claimed in claim 60 wherein the

wall defining the recess wall includes a [[third]] bottom wall portion intermediate the first wall

portion end shoulder and the second wall portion end shoulder, and wherein a distance between the

[[third]] bottom wall portion and a center of the recess is smaller than that has a length between the

center of the recess and each of the first wall portion end shoulder and the second wall portion end

shoulder, the length being substantially larger than a thickness of the first end of the pin, whereby the

first end of the pin is slidable between the end shoulders along the bottom wall portion without

sliding the pawl.

72 (new) A reversible ratchet-type wrench comprising:

a handle;

a head extended from the handle;

a cavity disposed in a web defined between the handle and the head;

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a compartment disposed in the web and having a first end communicated with the cavity and a second end communicated with outside;

a drive member rotatably mounted in a hole through the head, with the drive member including a plurality of teeth formed on an outer periphery thereof;

a sliding pawl disposed within the cavity and including a first side with a plurality of ratchet teeth for releasably engaging with the teeth of the drive member, with the pawl further including a second side with a recess, a wall defining the recess including a first wall portion, a second wall portion, and an intermediate wall portion between the first and second wall portions;

a rotatable switch member disposed within the compartment and including a turnpiece for manual operation and an actuating plate extended from the turn-piece, the switch member being switchable between two positions for sliding said pawl between a first location and a second location so as to change ratcheting direction of the drive member, with the actuating plate of the switch member including a first receptacle that faces the recess of the pawl and that has a first end wall;

an elastic element; and

a pin, with the pin having a first end movably received in the recess of the pawl and a second end, with the second end of the pin being received in the first receptacle and including a second receptacle with a second end wall, with the elastic element located in the first and second receptacles between the first end wall and the second end wall, with the pin and the elastic member being rotatable with the actuating plate and biasing the ratchet teeth of the pawl to engage with the teeth of the drive member, the first end of the pin alternating between bearing on the first wall portion and the second wall portion as the pin rotates, wherein when the pawl is in the first location, the center of the pawl is located in a different location than the center of the pawl when the pawl is located in the second location; and

wherein when the drive member is engaged with a fastener, and when the switch member is moved from one of the positions to the other position for moving the pawl from one of the first and second locations to the other of the first and second locations, the first end of the pin moves from one of the first and second wall portions to the other of the first and second wall portions of the pawl, with the first end of the pin pressing against the other of the first and second wall portions of the pawl when a longitudinal axis of the pin is parallel with a longitudinal axis of the handle, thereby imparting a force to the other of the first and second

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> wall portions of the pawl for moving the pawl from one of the first and second locations to the other of the first and second locations, and with the first end of the pin pressing against the intermediate wall portion of the pawl during movement from one of the first and second wall portions to the other of the first and second wall portions of the pawl.